

(12) UK Patent Application (19) GB (11) 2 290 016 (13) A

(43) Date of A Publication 13.12.1995

(21) Application No 9410905.5

(22) Date of Filing 01.06.1994

(71) Applicant(s)

Tian An Liou

52 Chang-Pien 3rd Road, Kao-Hsiung City, Taiwan

(72) Inventor(s)

Tian An Liou

(74) Agent and/or Address for Service

Marks & Clerk

57-60 Lincoln's Inn Fields, LONDON, WC2A 3LS,
United Kingdom(51) INT CL⁸

A43B 7/08

(52) UK CL (Edition N)

A3B B11

(56) Documents Cited

GB 2110520 A

GB 2019194 A

(58) Field of Search

UK CL (Edition M) A3B

INT CL⁸ A43B

ONLINE DATABASE: WPI

(54) Ventilated footwear

(57) A ventilating outsole which is integrally made of resilient material and formed on a top with a plurality of first protuberances 1 having a vertical through hole 11, a plurality of second protuberances 5 having a vertical blind hole 51 and a horizontal hole 12 communicating with the vertical blind hole, a plurality of openings 2, and a plurality of horizontal grooves 3 extending across the outsole and communicating with said vertical through holes the vertical blind holes, and the opening whereby the outsole can provide a good ventilation for the foot of an wearer.

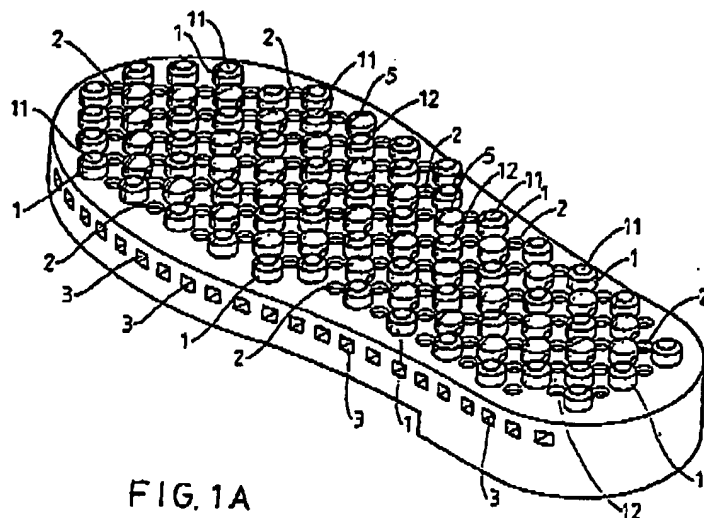


FIG. 1A

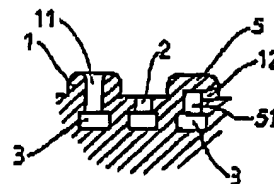


FIG. 1B

GB 2 290 016 A

1/2

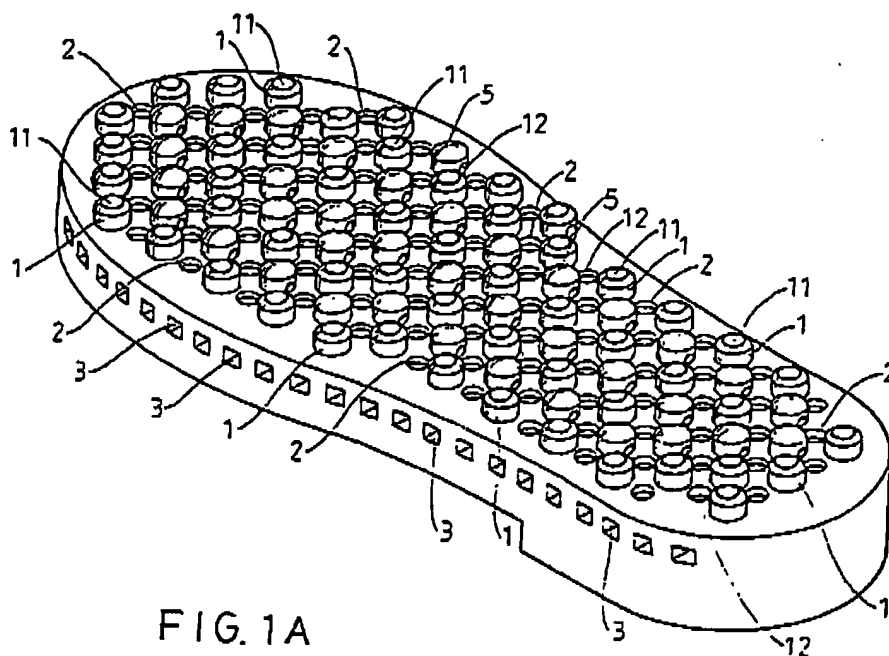


FIG. 1A

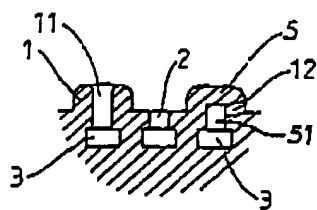


FIG. 1B

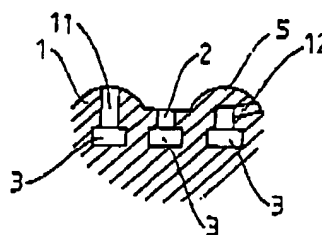


FIG. 1C

2/2

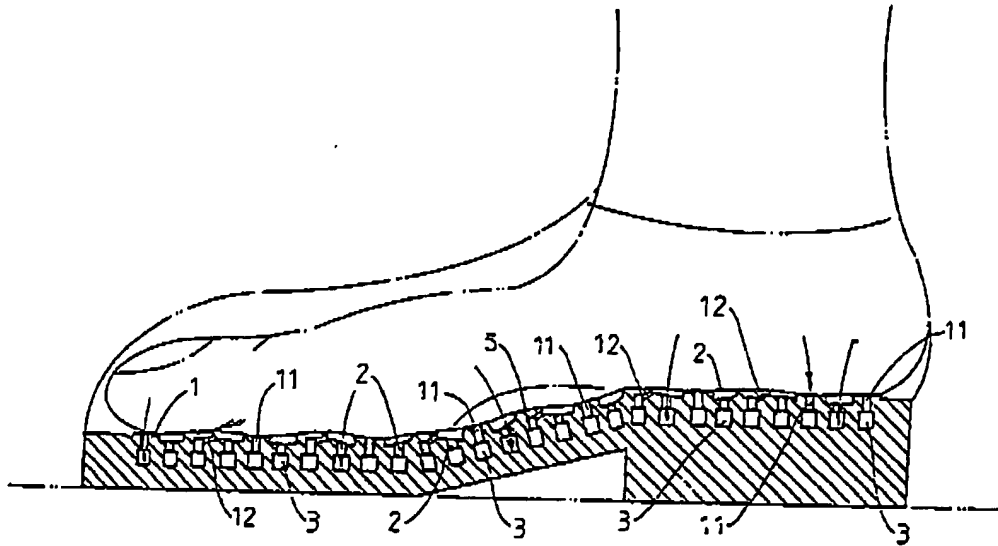


FIG. 2

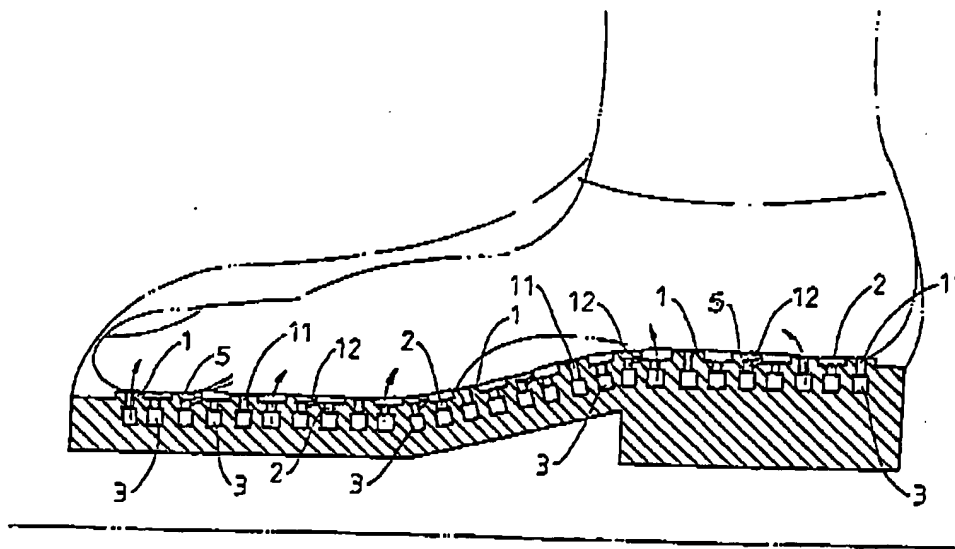


FIG. 3

2290016

1

TITLE: A VENTILATING OUTSOLE

This invention is concerned with an improved ventilating outsole.

It is conventional practice to form the outer sole of the footwear with air compartments each of which comprises a hollow projection, or to furnish the entire outer sole with flexibility and form air compartments within the outer sole in the art of ventilating the interior of an article of footwear with air. As the weight of the wearer is applied to the shoe or other footwear of this type, the air compartments are compressed so that the air enclosed within the compartments is forced out into the shoe through the inner sole to circulate the air within the shoe. With the conventional shoe of this type ventilation is achieved at the rear of the shoe through the gap between the shoe and the wearer's ankle, but sufficient ventilation is difficult to achieve at the front or toe portion of the shoe. The result is that moist air collects and stagnates in the marginal areas at the front of the shoe, causing the wearer's foot to become hot and

2

stuffy.

The primary object of the present invention is to provide an outsole which is comfortable to wear.

Another object of the present invention is to provide
5 an outsole which can provide a good ventilation for the foot.

Still another object of the present invention is to provide an outsole which is easy to fabricate.

Still another object of the present invention is to
10 provide an outsole which can promote the health of the wearer's feet.

A further object of the present invention is to provide an outsole which can promote the hygiene of the wearer's feet.

15 The invention accordingly consists of features of constructions and method, combination of elements, arrangement of parts and steps of the method which will be exemplified in the constructions and method hereinafter disclosed, the scope of the application of which will be
20 indicated in the claim following.

FIG. 1A is a perspective view of the present invention;

FIG. 1B is a fragmentary sectional view of the present invention;

5 FIG. 1C is a fragmentary sectional view showing another preferred shape of the protuberance;

FIGS. 2 and 3 show the working principle of the present invention.

Referring now to the drawings and in particular to
10 FIG. 1 thereof, the outsole according to the present invention is integrally made of resilient material and provided with a plurality of protuberances 1, protuberances 5, and openings 2 on the upper portion. The protuberances 1 and 5 may be arranged in alternate
15 rows. The openings 2 and the protuberances 1, 5 are arranged alternately. The protuberance 1 is formed with a vertical through hole 11 (see FIG. 1B). The protuberance 5 has a vertical blind hole 51 closed at its upper end and a horizontal through hole 12 communicating
20 with the vertical blind hole 51 (see FIG. 1B). A

4

plurality of horizontal grooves 3 extend through the outsole and are in communication with the openings 2 and corresponding vertical through holes 11 or vertical blind holes 51.

5 As shown in FIGS. 1B and 1C, the protuberance 1 may be of any desired shape such as cylinder, hemisphere, or the like, while the protuberance 51 may be also shaped as cylinder, hemisphere, or the like.

Referring to FIGS. 2 and 3, when the wearer depresses
10 the outsole according to the present invention on the ground during use, the weight of the wearer is applied to the outsole thereby pressing the protuberances 1 and 5 and therefore, expelling the air out of the shoe through the holes 11, 51, holes 12 and the grooves 3. As the
15 wearer continues to walk and the shoe is raised from the ground, the wearer's weight is removed from the shoe so that the protuberances 1 and 5 relax back to their original shapes. When they are doing so, fresh air is drawn into the shoe through the grooves 3, openings 12,
20 and holes 11 and 51.

5

The invention accordingly consists of features of constructions and method, combination of elements, arrangement of parts and steps of the method which will be exemplified in the constructions and method hereinafter
5 disclosed, the scope of the application of which will be indicated in the claim following.

Claims:

1. A ventilating outsole characterized in that said outsole being integrally made of resilient material and formed on an upper portion with a plurality of first
5 protuberances having a vertical through hole, a plurality of second protuberances having a vertical blind hole on a top and a horizontal hole communicating with said vertical blind hole, a plurality of openings, and a plurality of horizontal grooves extending across said outsole and
10 communicating with said vertical through hole, said vertical blind hole, and said opening.

2. The ventilating outsole as claimed in Claim 1, wherein said first and second protuberances are arranged in alternate rows.

15 3. The ventilating outsole as claimed in Claim 1, wherein said openings and said first and second protuberances are arranged alternately.

7

Patents Act 1977
Examiner's report to the Comptroller under Section 17
(The Search report)

Application number
 GB 9410905.5

Relevant Technical Fields

- (i) UK Cl (Ed.M) A3B
 (ii) Int Cl (Ed.5) A43B

Search Examiner
 JOHN GRAHAM

Date of completion of Search
 5 OCTOBER 1994

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant
 following a search in respect of
 Claims :-
 1 TO 3

(ii) ONLINE DATABASE: WPI

Categories of documents

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>X: Document indicating lack of novelty or of inventive step.</p> <p>Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.</p> <p>A: Document indicating technological background and/or state of the art.</p> | <p>P: Document published on or after the declared priority date but before the filing date of the present application.</p> <p>E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.</p> <p>&: Member of the same patent family; corresponding document.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Category	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2110520 A (STRIDE) whole document	1
A	GB 2019194 A (SANDMEIR) whole document	1

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).